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In This Issue

Vuelta Abajo, Cuba: A Study of Its Tobacco Industry . . . . *Mildred Letitia Lestina*

The Northwest Oyster Industry . *Otis W. Freeman*

Training in Democracy Thru a Geographic Study of Switzerland . . *Irene Abernathy*

Applied Geography . . . *Linnie Beck James*

Method of Procedure for an Excursion . . . . . *Ivan C. Diehl*

Germany—A Controversial Subject . . . . . *Elinor H. Milburn*

Preliminary Report of Chicago Meeting of the National Council . *President Edwin H. Reeder*

Pan American Day . . . . . .

Editorial Notes and News . . . . . .

Geographical Publications . . . . . .

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VUELTA ABAJO, CUBA: A STUDY OF ITS TOBACCO INDUSTRY

MILDRED LETITIA LESTINA
Chicago, Illinois

In the western part of Cuba is located the Vuelta Abajo district known as the leading tobacco producing district of the world. Composed of three parts; the major portion flanks both sides of the Sierra de Los Organos; the second, Remates, a small outlying subdistrict to the south, separated from the major portion by a strip of marsh land, occupies the flat coral reef lands of the southwest end of the island; and the third, the narrow eastern piedmont section bordering the western side of the Sierra de Los Organos. Production is localized in the foothills and adjacent undulating terrain, as well as in small intermontane valley floors and coral formation lands. This district in 1935 produced 52 per cent of the tobacco of the island.

The pattern of development of tobacco production in the Vuelta Abajo district has undergone a full span of geographic evolution from an infant stage of experimentation involving the shifting of its production to different areas, to a mature stage of stability in selected areas. It exhibits the determination of the local planters seeking lands capable of producing a product encompassing all the desirable qualities; namely, aroma, texture and elasticity. It received much of its encouragement and stimulus from the high degree of harmony with which this crop fits into the natural conditions present and the commercial demand for this product. Its final development in this district started after 1817, when the Spanish regulations prohibiting production were repealed and political conditions within the island became more settled. Experience had taught the planters that a product possessing all these qualities was obtainable only from well watered, well drained soils. Therefore, it was normal for the industry to develop on patches of heavier soil in the sub-district of Remates located in the far western end and

which overlies a limestone platform honeycombed with caverns. The heavier sandy clay soils were preferred to the friable sandy loams because the latter drained too rapidly. Altho the rainfall was insufficient the deficiency was alleviated by underground water seepage. A product was procured which had elasticity, aroma, texture and color but poor burning qualities due to salt water. This latter factor, plus occasional drought, hurricanes, high seas creeping in and flooding the land by seeping upward thru limestone caves, and the "root rot" discouraged production in this sub-district.

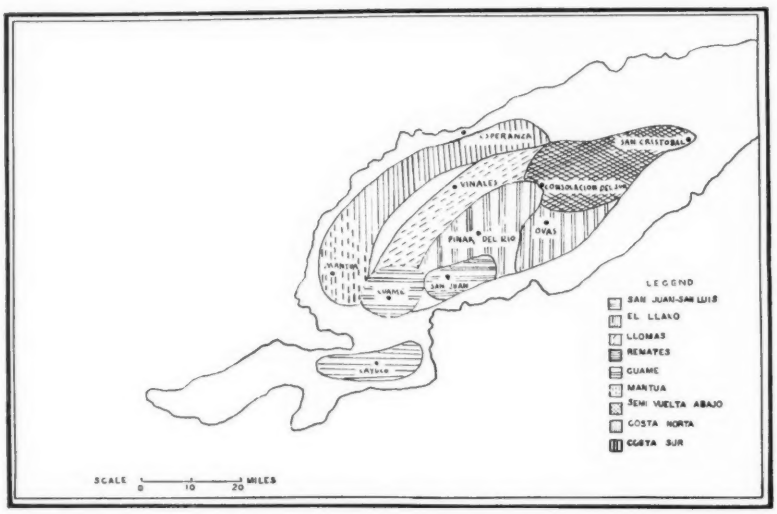

Fig. 1. Sketch map of the subdivisions of the Vuelta Abajo district and the focal centers within each subdivision. (Based on map published by Constantino Gonzales, Havana, Cuba, 1935.)

Spurs of the piedmont section characterized by alluvial soils bordering the lower course of the Rio Guame, San Sebastian and Mateo Sanchez in the El Llano sub-district were the areas to which the industry shifted. Altho these flatter lands suffered from occasional droughts the heavier alluvial, less well drained soils tended to ward off drought in the years of marginal rainfall. A tobacco of good burning quality was procured but instead two other undesirable qualities appeared; namely, heavy quality and strong aroma.

Gradually Cuban tobacco established its reputation in the foreign markets and its demand was growing. The desire of the growers to produce only the best tobacco and meet the rising market demands urged them on to look for more suitable areas to which to

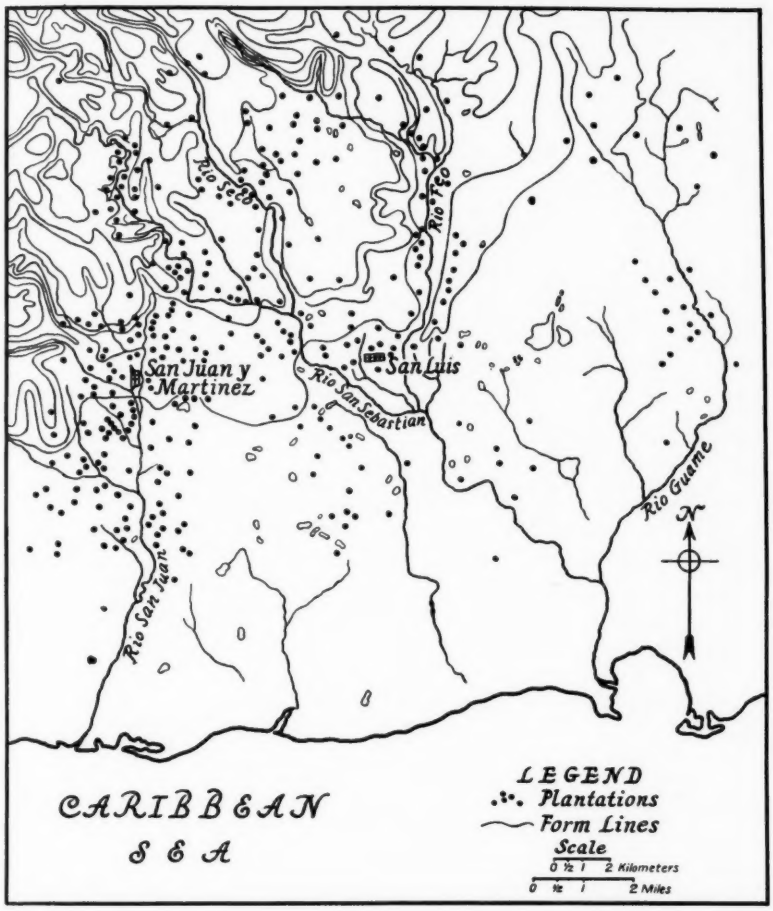

Fig. 2. The plantations cluster about the two selection centers San Juan and San Luis. Minor concentrations are along the natural levees of the larger rivers and their tributaries that drain this area and whose headwaters lie in the Sierra de Los Organos to the northwest. Form lines are spaced at approximately 10 foot intervals. (Based on map procured from the Cuban Land and Leaf Company, Finca Vivero, San Juan y Martinez.)

expand. This time the production focus shifted to the foothills of the El Llano sub-district. Prior to this time the gradient had been considered too steep, but production on patches of flatter land at the base or on the sides of the more gently rolling slopes met with success. Small irregularly shaped tobacco patches on the residual soils of the piedmont, which were more friable and where the slope was more gentle, spotted the landscape.

The foothills dissected by the stream channels of the Rio Guame, San Juan and San Sebastian offered good drainage and the heavier

rainfall in the foothills—rainfall not only more plentiful but sufficient in abnormal years—produced a tobacco of a more mellow, lighter texture and of good burning qualities.

Notwithstanding these advantages, tobacco culture did not remain focused in the foothills since production was hampered and reduced by leaching of the soils. Consequently the planters were forced to look for newer lands.

SHIFT OF THE PRODUCTION FOCUS WITH THE INTRODUCTION OF IRRIGATION

With the turn of the century and the successful introduction of irrigation on the gently undulating lands of San Juan and more flattish lands of San Luis there was inaugurated an intensive program of tobacco production in this sub-district. The gently undulating character of the terrain made irrigation a rather simple matter. A stationary pipe line was extended from the river or well to the tobacco fields, to which were attached portable lines and hoses at definite intervals. Diesel, internal combustion engines and electric engines generated by power from the Pinar del Rio hydro-electric plant were installed to pump the water thru the line. By this method not only could the flow be directed, but the amount applied to a particular area could be controlled. Too, the planting season was extended over a longer period of time which resulted in a greater increase in production and the flooding of the furrows at the time of transplanting practically annihilated the rootworm.

Here tobacco made its last shift and became firmly rooted. It produced a tobacco of superior flavor and aroma, of fine texture and burning qualities, a product with which that of no other region can compare. It came to be known as the "heart" of the district, a reputation which it still enjoys.

Thru the development of irrigation, tobacco production spread eastward and southward along the gently undulating lands, and the better drained flattish land, decidedly avoiding the flat, poorly drained lands of the savanna.

The streams and their many tributaries had an important function in the development of the area. The San Juan, San Sebastian and its larger tributaries are rivers of no great magnitude, but sufficiently large to supply all the water needed for irrigation purposes in normal years. These rivers rise in the Sierra de Los Organos to the northwest. Their headwaters lie in an area of heavier precipitation which increase their volume and provide more water

available for irrigation purposes. Rainwaters which have sunk into the rocks find their way slowly to the main streams and tributaries. These natural reservoirs feed the rivers during the dry months, but not sufficiently during years of insufficient rainfall to avoid drought. Receiving the maximum supply of water during the months of June and September, they are at their highest level at the time of seeding and first transplanting. Of particular significance is the fact that the mountain slopes are covered with wire grass and pines. This mantle of vegetation retards the run off during the heavy rainy season and prevents floods of the coastal areas.

Fig. 3. Hut of laborer on land too steep for tobacco culture. Altho the soils are suitable for tobacco culture the gradient is too steep, resulting in excessive drainage.

The tobacco industry of the San Juan-San Luis sub-district exhibits geographically a mature stage of development. Experimentation on new lands has ceased. The knowledge derived from such experimentation has been profitably used and today the planter knows how to get a fine product with his fund of practical knowledge he has gleaned from past decades of its culture, plus whatever information science has today to offer. The latter is used in maintaining the quality of the product rather than improving it. Improvement has been difficult, since the complexity of the soil structure and climatic elements are so very much involved and more specific analysis to date has not been done.

The sub-district has reflected its mature stage of development thru its practices of irrigation, pattern of occupancy, fertilization program and production. Irrigation has been applied to insure against crop failure in times of inadequate rainfall. The occupance pattern has been stable. No new land is available and the scarcity of land is reflected in the high price it commands on the market. All knowledge of soil productivity is applied thru a well balanced fertilization program and the soils are maintained at a high production level thru such a program. Much hand labor is used in transplanting, cultivating and harvesting of the crop. Today San Juan-San Luis is the leading sub-district.

Within the San Juan-San Luis sub-district lie the plantations.

The "heart" of the tobacco industry is between the foothills of the Sierra de Los Organos to the northwest and the savanna flats bordering the Caribbean on the southeast. It measures about twenty miles in width at its maximum in the south. The surface configuration of the terrain shows marked variety. The foothills, which slope to the sea, grade gently into undulating slopes at a rate of seven or eight feet per mile and finally disappear in the coastal flats. The area is drained by three northwest-southeast flowing streams and their tributaries whose headwaters lie in the Sierra de Los Organos range to the northeast and which empty into the Caribbean coastal lands where the drainage is poor. Small streams emerging from the lagoons disappear when they reach the more porous soil.

The cultural features in the landscape speak of the wealth bestowed by the natural features of the district. Upon entering the district from the north by way of Pinar del Rio one notices the larger and more pretentious managerial homes, the change of roofing on the curing and selection barns from thatch to tile, the introduction of the greater comforts of life such as electric lighting, electric refrigerators, radios, etc.

The natural features which have made possible this wealth are the combination of particular soils possessing physical and chemical qualities, that single them out from the other varieties present, plus the climate. Both of these are conducive to producing the finest aromatic tobacco in the world. The soils are composed of silicious material washed out from the piedmont sections, whose residual soils are formed by the decay of the underlying schistose quartzose rock. The characteristic sandy, gravelly and sandy loam types of tobacco producing soils of this sub-district occupy the well drained undulating slopes of the San Juan sub-district and the more flattish lands of San Luis.

Pattern of Utilization of Tobacco and Non-tobacco Producing Lands

Unlike the land used for growing tobacco, the seed beds are planted in high clayey virgin soils which retain moisture for germination of the seed. The fact that they are virgin soils makes them free from destructive bacteria and molds. The scattered and patchy distribution of suitable soils for seed bed purposes has necessitated the leasing or purchasing of seed bed plots in detached lands at some distance from plantations.

On the other hand, because tobacco is rooted to soils of a very specific character, and because of the sporadic appearance of such soils, the plantations are distributed in irregular patches over the landscape. A pattern of distribution of the plantations over the terrain shows a major cluster on the gently undulating lands in the west central end of the San Juan distrist close to the town of San Juan y Martinez. This town developed as a focal center of the San Juan sub-district. It served as a commercial focus for the movement

Fig. 4. The town of San Juan lies nestled in a depression between the gently undulating slopes of the sub-district.

of the product from the district and the movement of commodities into the district as well as a residential focus.

Radiating from this cluster, like spokes from a hub, a thread-like concentration is strung along the natural levees of the larger river courses, like those of the San Juan to the south and the San Sebastian and its branch, the Seco, to the north.

Two kilometers due east of San Juan y Martinez, a second cluster is located on the flat well drained soils of the eastern part of the sub-district. The town of San Luis developed as a focus in this minor cluster. As in the previous case, secondary concentrations are strung out along the Rio Feo. The interstream areas have few plantations because of the presence of the flat heavier soils which are poorly drained. Because of their relatively lower position than the adjacent natural levee lands the poor drainage became more pronounced.

The pattern of utilization of non-tobacco producing lands is varied. Much of this land is utilized for pasture, vegetable plots and home sites. Yellowish-brown soils altho capable of producing a sec-

ond rate crop of tobacco, are left in pasture. These soils can be distinguished from the tobacco soils by their growth of the Palma cana which does well in less well drained soils.

Along the small stream courses a poorly drained colluvial wash of grayish-brown fine sandy loam underlaid locally with a ferruginous hardpan of the mocarrero type is used for the growing of vegetables, bananas, *malanga,* etc. Each *partidario*[1] has his rented strip on which he raises practically all his food needs. Oftentimes this strip is not on the plantation but is some distance away.

The heavier phases of this soil bordering the river courses, which are swampy during the summer, are planted in rice during the rainy season and are used for pasture during the winter when they have dried out sufficiently.

Lands undesirable for tobacco because they are too heavy or too steep and municipal lands are inhabited by laborers. Some of the municipal lands border the roads. These municipal lands in recent years have been inhabited by Negro laborers who came from the Remates section during the depression in hopes of getting employment in this sub-district. Their make-shift huts with adjacent plots of subsistence crops denote a simple existance.

The town of San Juan y Martinez is located on a flat flood plain. Clustering close to the town and bordering the river are the huts of the permanent laborers of the sub-districts; close to the town to be able to get their wants easily, close to the river because the soil is not suitable for tobacco, but there they can easily get their water supply.

Thruout the district are patches of fine tobacco soil on slopes too steep for cultivation. These soils are very friable and an increased slope makes it difficult to apply or retain water thereon. These lands are also occupied by laborers.

The poorly drained savanna lands to the south and east can be sighted from a distance by a marginal growth of Palma barrigonia (bottle palms) and pajon, which do well on these more acid soils. Because they are swampy practically all year, they are left in pasture. Likewise the flat coastal lands which are subject to flooding because of the clayey condition of the soil, are left in native covering of pajon and pine. During the winter, these coastal lands have dried out sufficiently and serve as a winter pasture for the cattle of the tobacco planters. Each planter either rents or owns a strip

[1] Here the term *partidario* is applied to denote a sub-lessee who grows tobacco and food needs on rented land and for the use of which he pays in kind.

of this land. The cattle are driven here for pasturage while the tobacco lands, which are used for summer pasture are cropped.

Three types of tobacco are grown in the district; sun, windbreak and shade. The shade is grown particularly on the sandy loam soils. It is the most expensive to produce because: 1) it requires cheesecloth covering, 2) the more delicate plant has to be cultivated with care, 3) more losses of plants occur because it is easier prey to insects and disease, and 4) it has to be harvested with greater care. On the other hand, it produces the finest wrap-

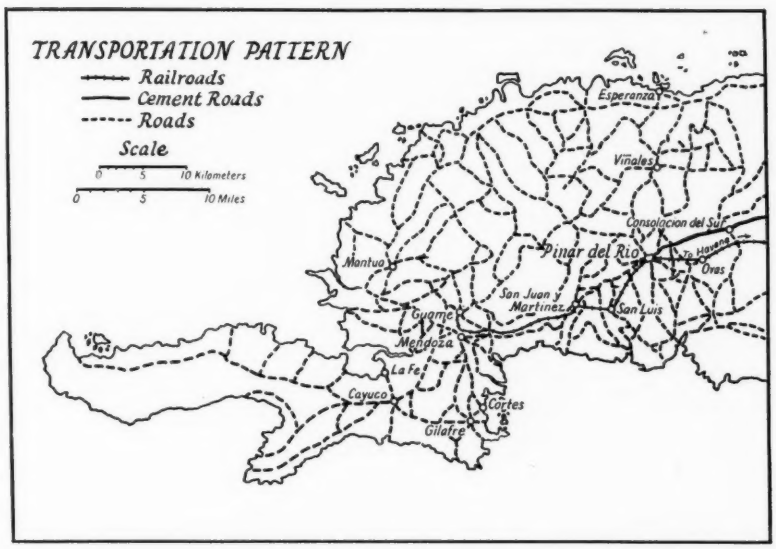

Fig. 5. The roads focus on the focal centers of the sub-districts. Major highways link the focal centers with ports or railroad connections. The building of the railroad and cement highway modified the focal character of the highway mesh. First, when the railroad was introduced the buyers could make the trip in one day to the individual plantations, and focal centers ceased to function as selection, as well as dispatching centers, because intermediate stops arose between them. Secondly, tobacco is trucked from Pinar del Rio directly to Havana.

per, and commands a high price. Windbreak tobacco, which is cheaper to produce because it only requires partial shade and less care is also grown on these types of soil. It is not as valuable since the quality of wrapper produced is not as fine. Market conditions determine more or less the growth of the particular type. Sun tobacco, which is produced mostly for filler and binder, is grown on the heavier soils.

The plantations are either owned by the Cuban Land and Leaf Company or by private individuals. The individually owned planta-

tions are managed either by the owner himself or by administrators. About eighty per cent of these individually owned plantations are managed by administrators for absentee owners. Many of the individually owned plantations were originally acquired thru land grants, and the wealth acquired from the lands thru several generations has permitted the owners to live abroad. The administrator either acts for the absentee land owner on a salary basis or leases the property from the owner for a stipulated rental. In some instances the administrator manages the entire plantation himself or sub-leases it to *partidarios*.

TRANSPORTATION PATTERN WITHIN THE AREA AND DEVELOPMENT OF LOCAL MARKET CENTERS

As mentioned before, the first tobacco cultivation was developed in the district of Remates. Since no railroad penetrated into the western end of the island at that time and roads were very poor, the tobacco was shipped from Cortes, a port at the eastern end of the Remates district to Batabano, a port due south of Havana on the southern coast of the island, and thence by train to Havana.

Today, with the exception of the American tobacco used for cigarettes which is affected by sea breezes, the crop is shipped direct to Havana by an all water route from La Fe, a port at the western end of the Remates district. The American tobacco is transported by truck to Mendoza and thence to Havana by rail.

As the major district was developed, the tobacco was transported by cart to Cortes on the Caribbean where it was loaded on boats and shipped to Havana via Batabano. It was during this period that the local marketing centers developed. On mule-back, over poor roads, the buyers made the journey requiring several days, to the selection and marketing centers of Pinar del Rio. The mesh-like road pattern in this district gave them access to the individual plantations. In keeping with the configuration of the terrain, these roads were tracked out first to afford easy access to various places in the plantation. Tracks made by individuals along the routes of easier traverse, developed the roads. These irregular roads became dividing lines when the land grants were sub-divided. Close to their site were located the managerial home. Foci within this web became located at the local tobacco marketing centers. The largest center is at Pinar del Rio, a focus of many dirt roads, which connect today with the main commercial arteries, the railroad and the recently built cement road. Pinar del Rio was the cen-

ter to which the buyers came, and from which they made short one-day journeys to the various local centers in the district, and Pinar del Rio built hotels and flourished as the center of this trade.

Of lesser magnitude were the local selecting centers of San Juan y Martinez and San Luis. Others not included in the figure were Ovas, Gilafre, Mantua, Cayuco and Guame, smaller centers in the Vuelta Abajo district. The latter three, Guame, in the southern part of the Llomas district, Cayuco in Remates and Mantua in the Costa Norte districts are still local centers for the selection and marketing of their tobacco.

Later the railroad was built, first as far as Consolacion del Sur, then to Pinar del Rio, and still later to San Juan y Martinez. Its terminal today is at Mantua. With the extension of the railroad, buyers from Havana are now able to make the journey to Pinar del Rio or to San Juan y Martinez in five hours. With the aid of automobile from these points, they can go directly to the individual plantations, buy the type of tobacco for which they have a current demand, and return to Havana the same day. The building of the railroad has caused a new orientation in marketing. Pinar del Rio has lost much of its hotel trade, but it still continues to be the banking, hospital, commercial and amusement center for the San Juan and San Luis sub-district.

Two years ago a hard road from Havana was completed as far as Pinar del Rio. The road is a four lane highway and parallels the railroad quite closely. It passes thru the important towns and forms an important commercial artery over which much of the produce and passengers from this district move. Bus lines operating between Havana and Pinar del Rio run on a regular schedule, but no trucking service has been introduced.

Today, thru economic forces the extent of the industry has been curtailed. Tobacco production which had spread eastward and southward onto the flatter marginal production lands has been abandoned because of today's market conditions. The economic depression has decreased the buying power of the world market. To meet these market conditions, involving competition with cheaper tobacco from other producing areas in these abnormal years, the district has concentrated on choice lands its production of best grades of tobacco, for which a market could always be found. With conditions returning to normal, production will again expand to the less desirable lands producing an inferior grade of tobacco.

THE NORTHWEST OYSTER INDUSTRY

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Eastern Washington College of Education

During the decade following 1929 a new industry, that of oyster culture, has developed in the State of Washington. The "crop" amounts to over one million bushels per annum, worth nearly two million dollars when canned or marketed as fresh oysters.

Native oysters (Ostrea lurida) small in size but delicious in flavor, grew on the tide flats of Puget Sound, Willapa Bay, Gray's Harbor, Tillamook Bay and other inlets along the Northwestern coast. These resources began to be exploited about 1860, the oysters being shipped mainly to San Francisco. No precautions were taken by the oystermen to insure the perpetuation of the industry and after fifty years the number of native oysters had been so greatly depleted that oyster fishing ceased except near Olympia, on Puget Sound. In 1895 the legislature of the state of Washington passed a law providing for the sale of tide lands for oyster production. This made it profitable for men to plant and care for oysters since the "crop" produced belonged to the owners. Near Olympia, men carefully prepared the tide flats, building dikes to keep several inches of water standing over the oysters at low tide, and transplanted the young shellfish from the "seed" beds to the growing beds where they matured. The oysters were small in size and production costs were high which required a relatively high price for the Olympia oyster, as the native oyster is called. Except near Olympia the culture of native oysters was not attempted and the industry had commercially ceased. In spite of its high price the Olympia oyster seldom is produced in quantity sufficient to satisfy the demand. The success of the Olympia oyster grower depends largely on whether he has good seed ground. Clean shells are added to the seed ground in early summer and after the spat have set they are removed to other areas to grow and fatten. Olympia oysters require four or five years to reach maturity. The oysters are "harvested with large forks.

Experimental attempts were made to introduce oysters from the Atlantic Coast but Pacific waters proved too cold for the spawning of this species. Other species of oysters were tried with scant success until the Japanese oyster (Ostrea gigas), named because of its large size, was tried. About ten years were required to show that this

species was ideally adapted to conditions in Washington waters, in fact the oysters grew over twice as fast as in their native home in Asia. By 1929 the oysters began to be successfully marketed and their commercial production thereafter increased rapidly. Growers decided to market their product under the name of Pacific oysters rather than use the word Japanese. Oysters are also marketed under trade names like Willapoint for oysters canned by the

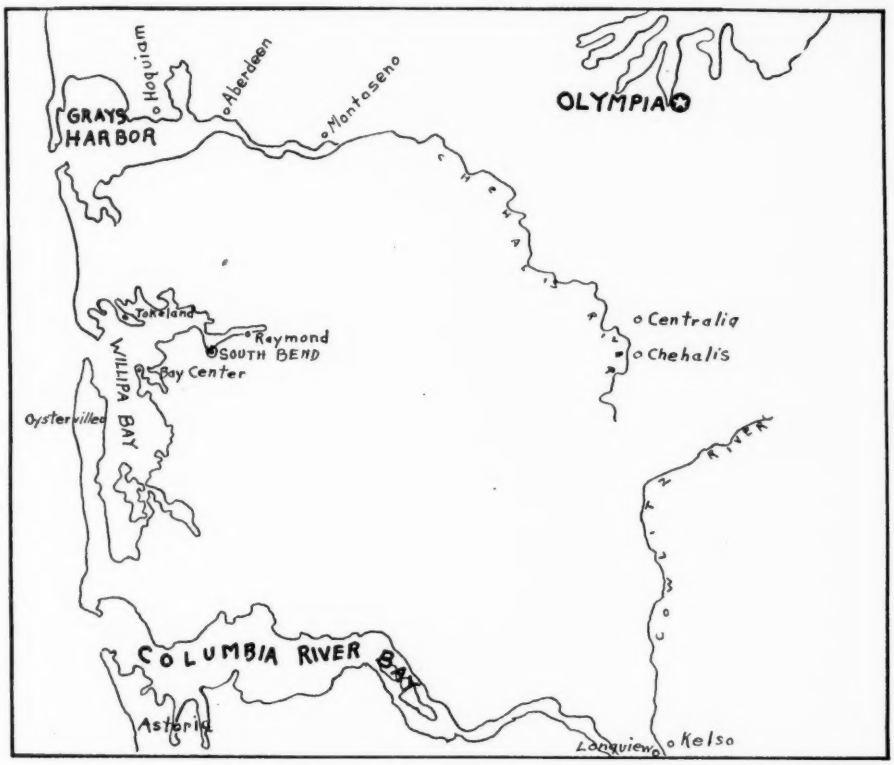

Fig. 1. Sketch map of the oyster region of Washington

largest producer in Washington located on Willapa Bay. The State of Washington supplied 90-95 per cent of all the oysters produced on the Pacific Coast in 1938.

NATURAL REQUIREMENTS FOR OYSTERS

Oysters require an adequate food supply, suitable clean shells, rocks, or other firm surfaces to which they may attach themselves in shallow water, relative freedom from enemies, like the starfish, protection from storms and waves, etc. The food of oysters

consists mainly of a large variety of small plants, called diatoms, altho the Pacific oyster can also assimilate bits of kelp or seaweed. Diatoms are very plentiful in Willapa Bay, Puget Sound and other coastal waters, which encourages rapid growth and fattening of the introduced Pacific oyster. The native variety appears more choosey in its food and grows more slowly. Oyster beds require a location where tides have a small range and are favorable to supply large quantities of diatoms. The bottom should not be too sandy since this might allow shifting of the bed by waves, nor too muddy since this might allow oysters to bury themselves. Ideal conditions are a layer of hard sand covered with a few inches of silt into which a man walking over the bed might sink in ankle deep. About a foot of water should cover the shells at low or average tide, altho in some localities the oysters remain out of water for a few hours at low tide without injury. While all natural oyster beds are found in bays and other coastal waters where the salt water is somewhat diluted with fresh, yet the water must not be too fresh or else the rate of feeding and hence the rapidity of growth is adversely affected.

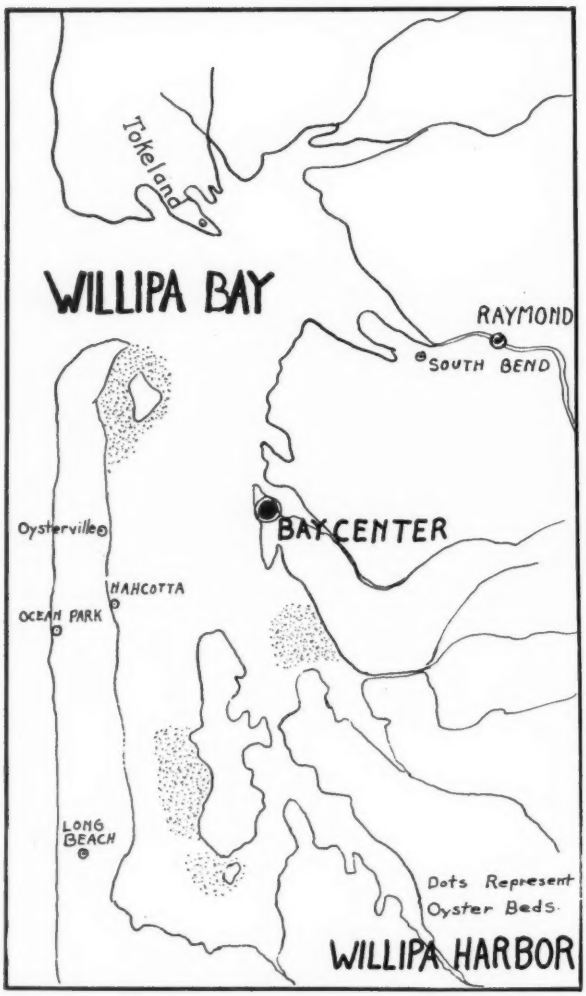

Fig. 2. Sketch map of the oyster beds and canning centers

THE PACIFIC OYSTER

While the Pacific oyster spawns in Washington waters and some "seed" has been collected especially at points along Hood's Canal, an estuary east of the Olympic Peninsula, the main supply of "seed" is imported from Japan. The Olympia oyster is of hermaphrodite habit, i.e., each oyster can fertilize its own eggs, but the Japanese oyster has separate sexes. Spawning occurs with the warming of water in the summer. An adult female oyster may

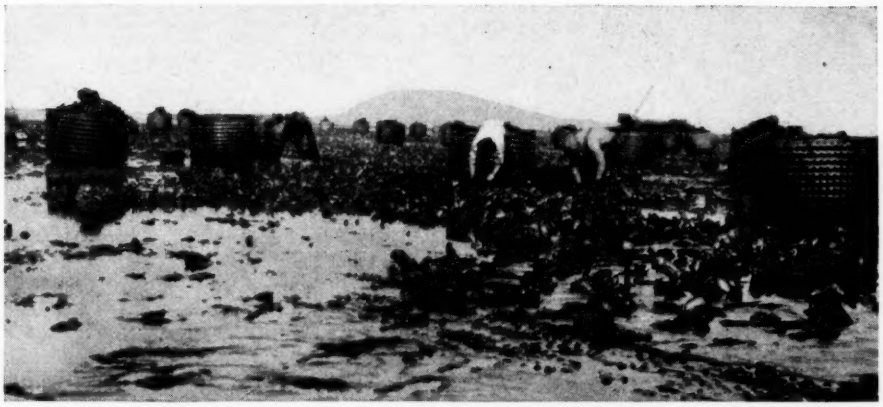

Fig. 3. Harvesting mature oysters at low tide into large steel baskets that at high tide will be hoisted into scows and towed to the cannery

release over a hundred million eggs into the ocean where fertilization occurs with the sperm from the male oysters. After fertilization the eggs develop in a few hours into small, free swimming organisms called larvae. After feeding and growing for several weeks the larvae are ready to attach themselves to a clean, firm surface on which they grow to maturity. During the larval stage the mortality among the baby oysters is enormous. They serve as food for barnacles, jelly fish, worms, and other forms of sea life, they are washed up on shore with the tide to perish when the tide recedes, but the incalculable billions of eggs liberated allow for tremendous waste and still allow for adequate reproduction of the species.

In Japan "seed" oysters attach themselves during the summer to shells strung on wires fastened on posts standing on the tide flats that experience has shown are favorable spawning grounds. Next spring, from a dozen to twenty young oysters, a fraction of an inch in size, have become attached to each shell. After collec-

tion, the shells are shipped to Seattle; shipments being made in boxes that contain about two cubic feet. The shells are often broken into pieces to permit closer packing, and less crowding during growth of the big oysters. The shippers guarantee from ten to twenty thousand living small oysters per box on arrival and charge from $2.50 to $3.00 per box at Seattle. The boxes are carried as a deck cargo and the trip across the Pacific takes two or three weeks, but the weather is cool and moist, and the oysters survive the journey remarkably well, losses not exceeding ten per cent. About

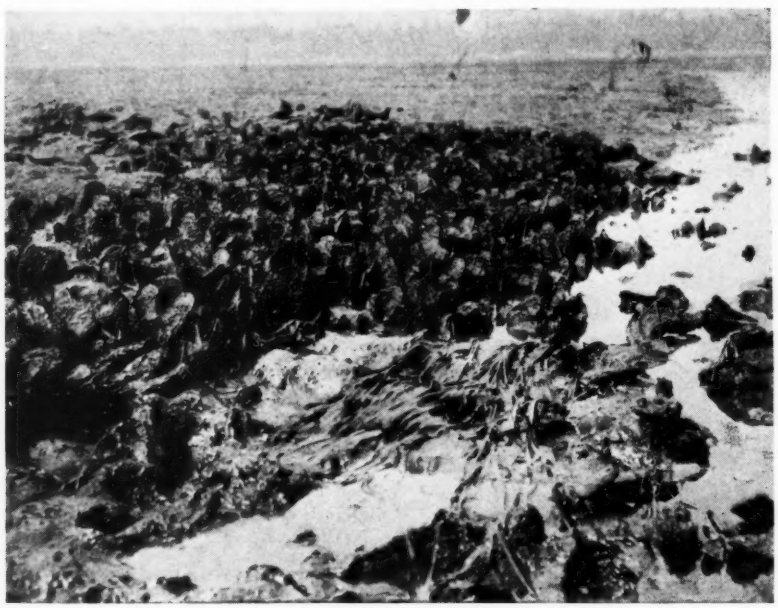

Fig. 4. Oysters in Willapa Bay

sixty or seventy thousand boxes of "seed" are planted annually, generally in March and April. The oyster "seed" is distributed over the breeding grounds by shoveling the shells from scows. Generally a minimum of twenty-five bushels of oysters are harvested from a single box of "seed." Under favorable circumstances it is said to be possible to grow over 200,000 oysters per acre. Pacific oysters in Washington waters grow very rapidly and would reach a length of twelve to eighteen inches and a width of several inches in three or four years. Since little demand exists for such huge oysters, they are ordinarily marketed at a much smaller size in a year to eighteen months after planting when the oysters have their greatest tenderness and flavor. While the

Olympia oyster averages about 1,600 to the gallon and the Eastern oyster 150 to 250 per gallon, the Pacific oyster is generally marketed in sizes that run from 100 to 150 per gallon altho they may be purchased in sizes that need only 40 or 50 to equal one gallon.

In deeper waters oysters are gathered by tonging but in shallow waters forks are used to toss the mature oysters onto flat

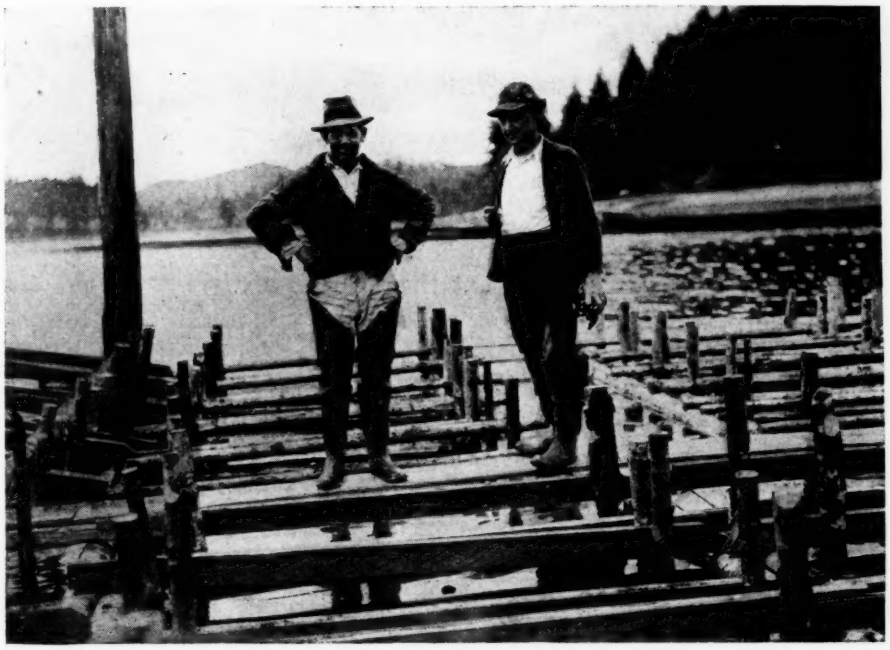

Fig. 5. Float in which shells or other spat collectors are placed to catch oysters for either the Olympia or Pacific varieties

boats called bateaux that rest in the mud at low tide and hold about 100 bushels of oysters each. Often the oysters are picked up by hand like potatoes and are tossed into large steel buckets which can be hoisted onto scows conveniently. Taken to the shucking sheds the oysters are removed from the shell, sorted and graded and otherwise prepared for shipment to market.

Some oysters are sold to the consumer in their shells but mostly they are marketed in sealed glass, or other containers, kept at temperatures slightly above freezing, which ensures their receipt by purchasers in superior condition for both flavor and sanitation.

Pacific oysters are well adapted to canning and one of the largest producers which controls by ownership and leasing some

8,500 acres of oyster beds, cans its entire output, marketing the canned product under the name of Willapoint oysters. This company has a cannery at Bay Center on Willapa Bay whose output accounts for about two-thirds of the entire pack of oysters in the Northwest. Nine canneries processing the Pacific oyster are in operation of which five are located on Willapa Bay and the balance on Gray's harbor, and other coast locations. None are canned on Puget Sound. Besides supplying much of the demand on the West Coast, canned Pacific oysters are sold increasingly in the Middle West. About 60 per cent of the pack is sold east of the Rocky Mountains.

At the cannery the oysters are unloaded from the bateaux by a conveyor chain and conveyor belts that carry the oysters either to storage bins or into the plant. Next the oysters pass slowly thru a tunnel exposed to live steam which kills the animals and causes the shells to gape. Next the oysters are removed by hand from their shells by workmen, called shuckers, and the oysters are carried to a pneumatic washer where they are tumbled about in clean water by the bubbling of compressed air entering at the bottom. Women wearing rubber gloves then inspect and grade the oysters as to size and quality, after which the oysters are placed in cans, hot brine is added and the can top is clinched on. Then the canned oysters are cooked by steam under pressure and after cooling are labelled and cased for shipment. Shells from the cannery are a by-product and are crushed for poultry food and other uses.

The pack of Pacific canned oysters began in 1931 and probably attained a record output in 1939. In recent years the Pacific oyster has accounted for from one-sixth to one-fifth of the entire output of canned oysters in the United States.

Pacific Oyster Pack in Cases of Four Dozen 10-ounce Cans

1931	7,930	1935	88,062
1932	12,233	1936	118,853
1933	31,315	1937	110,872
1934	68,323	1938	99,700

TRAINING IN DEMOCRACY THRU A GEOGRAPHIC STUDY OF SWITZERLAND*

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As this paper deals with an experiment in classroom democracy thru a geographic study of Switzerland, I wish to preface my remarks with a brief explanation of the classroom organization and technique used in this unit of work.

Movable chairs greatly facilitate shifting from one type of procedure to another as the occasion demands. Much of the work requires the assembly of the entire class; but, for the most part, students draw their chairs into small circles of four to twelve each and work in groups. Each circle elects its captain daily, or at less frequent intervals. In addition to his duties as leader of his circle, the captain assumes the responsibility of helping the weaker members of his circle and of otherwise promoting the work of the group. The personnel of the individual circles changes frequently, and merging of entire circles is not uncommon. Each student, however, develops a sense of responsibility to his group and to his task; this discourages promiscuous shifting from circle to circle.

This method of procedure helps in correcting mal-adjustments and in solving many other classroom problems. Timid children, over-bearing children, children who dislike work, and children otherwise poorly adjusted, learn the spirit of cooperation and give-and-take. In this unit of work one boy organized a circle; as captain, he became over-bearing, difficult to work with, and otherwise a poor leader. His members deserted him and joined other circles. After a week as captain of a circle without members, he joined another group and became a good worker.

Such group work requires close supervision. I frequently visit each group and discuss with the students their findings as well as their problems. By avoiding a dictatorial attitude, and by making group visits in an informal, non-routine manner, I am best able to draw each student into a discussion of his work. I find that praise given to those who deserve it brings good results; it encourages children to work and it teaches them standards of appraisal.

If children are to know the world in which they live, they should

* Paper presented at the annual meeting of the Alabama State Council of Geography Teachers, Montgomery, March 24, 1939.

approach it from all angles during their period of learning. Situations must arise in which thought, open-minded and far-reaching, will take form. In these groups students receive training that draws to the surface every capacity for service, both to self and to society.

European Background for Studying Switzerland

The students of my sixth grade studied Europe as a whole for several months before beginning the unit on Switzerland. Thru the use of current events, textbooks, maps, and other materials, they gained a rather clear understanding of much of Europe's geography, as well as acquaintance with some of its more interesting recent happenings. They learned the location of the great beds of iron ore and coal, the oil fields, the forests, and the great land resources. They had studied England and learned that it was a great manufacturing nation, and that this occupation furnished money with which to import its foodstuffs. They had studied Greece and learned the influence of the mountains on the country as a whole and on the lives of the people.

The study of Germany and Italy, largely thru current events, proved especially interesting. The students followed closely Hitler's demands on Czechoslovakia, the latter's changing government, and Hitler's dictatorial part in the affairs of Czechoslovakia after its territory was divided. Hitler's statement that democracies had failed came as a challenge to the students, and they raised the question, "Why doesn't Germany swallow up Switzerland?"

A Unit on Switzerland—The Beginning

Interest next focused on Switzerland. Outline and textbook maps furnished materials for the beginning. The students readily saw that Switzerland was a land-locked country, surrounded by large powers. They saw it lacked geographic unity and was mostly mountainous. They saw that it was a small country, poor in natural resources. Drawing on their understanding of mountain peoples gained from the study of Greece, the students reached the conclusion that to conquer the brave, sturdy, and fearless Swiss people would cost more than it would really be worth. They decided that Switzerland was a "have-not" nation like Germany, Japan, and Italy. This question was asked: "How does the democracy of Switzerland succeed without an excuse to sieze another's land?" We listed for future references the several suggestions that this question brought forth.

OBJECTIVES AND ACTIVITIES

In teaching this unit of work I set up the following objectives:

1. To develop on the part of each student a feeling of freedom and ease in making suggestions and in asking questions.
2. To develop on the part of each student free participation in class discussion and other class activities.
3. To give the students experience in managing their own groups.
4. To discover and utilize individual student talents.
5. To develop these skills:
   (1) to read effectively.
   (2) to read and interpret intelligently grafs, maps, and charts.
   (3) to learn the kinds of books to consult and the way to use them in finding specific information.
   (4) to organize and present information to others.

In carrying out these objectives thru a study of Switzerland one may undertake a number of activities, some of which are adaptable to small groups and others which are more suitable for the class working as a whole. Most important of all, the teacher must plan activities which enable her to supply individual learning needs. Below are listed some of the activities undertaken in the present study:

1. Reading books on Switzerland, such as the story of William Tell, and Heidi.
2. Painting Swiss scenes.
3. Dramatizing pure democracy.
4. Writing letters from Switzerland.
5. Celebrating the coming of spring.
6. Drawing a large map of Switzerland.
7. Making grafs showing trade between United States and Switzerland.
8. Making a poster showing that Switzerland is our third best car and radio customer and fifth buyer of typewriters.
9. Making costumes.
10. Climbing Alps with spelling words.
11. Acting the part of a guide.
12. Making a picture show of free hand drawings.

WORK WITHIN THE CIRCLES

After a brief introduction to Switzerland with the entire class assembled, the students returned to their small circles, where each group worked on some particular phase of the study. Reference material consisted of news items, numerous geography texts, and a large pack of material directly from Switzerland.

In planning ahead of the students, I had to be familiar with all books, maps, and other materials used as references. As the work progressed many questions arose which required immediate settlement. For instance, in painting a scene, the question as to whether

the Swiss used brick or stone for house pillars, required an answer before choosing a color for that part of the painting. Available statistics on population, area, language, income, etc. furnished a basis for arithmetic problems in long division and percentage.

One group suggested that we draw a relief map of Switzerland. This proved too big a task for a single circle, so I called the entire

Fig. 1. Movable chairs greatly facilitate shifting from one type of procedure to another as the occasion demands. Such arrangement permits the students to draw their chairs into circles of four to twelve each and work in groups, thus facilitating cooperation, democratic procedure, and effective work

class together to discuss and plan the map. We had a good relief map for a guide. From this work the students learned about the great midland and its relation to the distribution of people, and many other interesting facts about the physical features of Switzerland.

Cheese-making proved especially interesting to all the class. Each student read freely from the material we had: he learned

about the different processes in cheese-making, the different kinds of cheese for which Switzerland is famous, the history of the toasted cheese sandwich, and many other interesting facts. All were greatly impressed with an account of an old Swiss custom of writing the baby's name on a wheel of cheese and serving portions of it on ceremonial occasions thruout life. But we did not neglect

Fig. 2. With proper encouragement students develop various skills in the geography work-shop

the geographical side of cheese-making. The students learned of the amount of cheese produced and consumed in Switzerland and compared Switzerland with other countries on that score. They also learned of trade in cheese, and of copying of Swiss cheese in other countries.

The study of cheese-making, naturally, led to the question of feeding and pasturing the dairy cattle. The students readily saw that most of the land was too rugged to cultivate and that the high mountain pastures and meadows were of great importance to Swiss dairying.

On learning of the limited production of Switzerland's land, the students saw the need for turning to some other industry; for, with all their hard work, the Swiss cannot raise enough food. Several students suggested manufacturing, for Switzerland has cheap water power and a few raw materials. But they immediately raised the question: "Who would buy its manufactured products? Other nations all around it also manufacture." The class, thru their reading, learned that the Swiss people have special schools where craftsmen can receive expert training, that families pride themselves on becoming experts in cheese-making, lace-making, wood carving, and other trades which are handed down from father to son, and that a craftsman's success depends upon the quality of his work. In order to meet competition the Swiss must produce goods of high quality.

Most of the Swiss people attend the public schools and many receive additional training in its universities, or in special trade and technical schools. Only about one in each thousand reporting for military service is unable to read and write. By gaining an understanding of their country's problems thru education, the Swiss citizens are prepared to take active, intelligent parts in the affairs of their government. This intelligent training for citizenship is very necessary in making any democracy a success.

When emphasis focused on the matter of making Switzerland a better place in which to live, the students immediately began to evaluate the facts they had previously learned. They saw the great value of having a strong, educated, middle class, of the feeling of equality among its people, and of the small part played by titles, wealth, and high offices. They saw the value of Switzerland's excellent transportation system and its accommodations for tourists, the entertainment of which is its greatest industry. A comparison with the United States showed that the per capita wealth in Switzerland in 1928 was $3000, while in the United States it was only $2098, thus emphasizing the thrift of the Swiss people. The students were impressed with the fact that Switzerland does not quarrel with its neighbors or allow itself to be drawn into foreign entanglements; and that, altho it may be in sympathy with the democracies, Great Britain and France, rather than with the dictatorships, it remains quiet. An examination of Swiss history shows that Switzerland has enjoyed a long period of peace. The students noticed that it spends nothing on wars and relatively little on military activities, thus avoiding an expense that keeps many nations poor.

They saw a correlation between the high living standards and high per capita wealth of the Swiss people, and the way the nation behaves toward other countries.

A SWISS FESTIVAL—THE COMING OF SPRING

The unit on Switzerland closed with a celebration of the coming of spring. This consisted of the burning of the "Bogg," with pa-

Fig. 3. These students celebrated the coming of spring with costumes and ceremonies which they adopted from the Swiss custom

rade, ceremonies, etc., typical of Swiss custom. A committee of three boys made the "Bogg" man of sacks stuffed with straw. All wore quaint costumes which they designed themselves. (The boys wore leather aprons and carried implements suggesting their trade.) Two cows decorated with flowers were led in the procession. All paraded across the school grounds to the appointed place where the "Bogg" man was burned. A girl, then hurried across the campus with her alpenhorn to call "Good night! All is Well." Another "Good night! All is Well!" echoed from the other side. An old familiar folk song, sung in unison, ended the celebration.

CONCLUSION

The Swiss philosophy of life and their regard for democratic principles make a lasting impression on sixth grade boys and

girls. They do not forget how forcefully the Swiss people exemplify the truth of the statement made by Woodrow Wilson in his work, *The State,* that "The Swiss Canton, thus divided by language demonstrates how political union at once stable and liberal may be formed on the single condition that each ethnic group respect the liberties of every other, merely doing unto others as it would have them do unto itself." These students feel that they have found in Switzerland proof of the fallacy of Hitler's statement that "democracy has failed."

With this group of students interest in Switzerland will be permanent. They are constantly on the lookout for comments on Switzerland. The recent news item concerning the ninety Swiss guards at the Vatican caught their attention and stimulated discussion. Furthermore, I believe this study has left a lasting appreciation for the principles and practices of democracy. Certainly no other country could serve better as an example of successful democracy; and no other unit of work could better set the stage for living democracy in the classroom. I believe that experience in school should lead students, thru practice, to real democractic living. The principles of democracy applied in the classroom should influence their conduct, and thus, improve their function as citizens.

APPLIED GEOGRAPHY

LINNIE BECK JAMES
Forest Hills School District, Wilkinsburg, Pennsylvania

Why do so many children name geography as the most disliked school subject? One answer is that geography is often ineffectively taught. Many times the geography lesson is a memorization of unrelated facts that have little use when mastered. Frequently a study of relationships is lacking and as a result the lessons are superficial and lack reality. "We learn what we live," is a definite challenge to teachers to make it possible for pupils to "live" their geography. If a life situation can be set up utilizing their geographic knowledge, there will be little difficulty in getting the pupils to understand relationships and to remember facts.

With a firm resolution to make the class "live" their geography, the teacher of 105 eighth grade pupils planned to teach the geography of the United States thru a life situation that would require a definite application of the geographic information learned. Perhaps a statement concerning the teacher's objectives will clarify the description which follows:

GENERAL

1. To teach the natural and cultural relationships between man and his environment in the United States and the world relations of the United States thru a life situation.

SPECIFIC

1. To acquaint the pupils with the conditions in and the problems of the various parts of the United States.
2. To develop an appreciation of our country's beauty and resources.
3. To develop a consciousness that a knowledge of geography is essential in every vocation.
4. To teach pupils to apply geographic knowledge to a life situation.
5. To teach children how to study.
6. To encourage the interests and aptitudes of the pupils and to have, in so far as possible, individual education within mass education.
7. To teach "success" and not "failure."

INTRODUCTION

On the first day, an informal discussion was held concerning the various lines of work that would use a knowledge of geography. A list was put on the board and comments were made as to how each vocation would use that knowledge. Then the question was asked, "If you were to have a trip thru the different parts of the United States, what means of travel would you choose?" The answers varied but a large majority chose air travel. The next question was,

"Can you think of any business firms or government agencies that might send people on a tour of the United States?" Salesmen, buyers, designers, illustrators, government inspectors, news reporters, newsreel cameramen, and others were suggested.

PRESENTING THE PROBLEM

"Our geography for this term deals with the United States, so let's take an air trip on real air lines over the United States. Each of us will go as a business person sent by a company on a real job. Choose a line of work in which you are most interested. You may wish to sell farm machinery, office equipment, or you may wish to design materials, or write articles for a magazine. Several times during our trip you will be asked to send a report to your company to tell them what progress you are making and the conditions that are favorable or unfavorable to your line of work."

The following air trip was planned by the children with the aid of an Airway Map of the United States (issued by Dep't of Commerce).

I. New York to Washington
II. Washington to Atlanta
III. Atlanta-Miami-St. Petersburg-Daytona Beach-Atlanta
IV. Atlanta to New Orleans
V. New Orleans to Los Angeles
VI. Los Angeles to San Francisco
VII. San Francisco to Seattle
VIII. Seattle to Chicago
IX. Chicago to Buffalo
X. Buffalo-Boston-New York

Below is the enlarged outline which the teacher made so as to insure the inclusion of all the material in the study.

I. New York to Washington
   1. Study of New York City—reasons for growth—industries, etc.
   2. Study of the imports of the United States
   3. Study of world areas that produce coffee
   4. Cities in the vicinity of New York City
      Bayonne, Paterson, Passaic, Newark, Elizabeth, Jersey City
   5. Truck garden section of New Jersey
   6. Camden and Philadelphia
   7. Baltimore—canning industry—oyster fisheries in the Bay—iron and steel industry
   8. Arrival at Washington
   9. Report to business firm

II. Washington to Atlanta
   1. Washington—places of interest

2. Topography of Virginia—Shenandoah Valley—caverns
3. Richmond and Norfolk
4. Raising of tobacco
5. Winston-Salem, Durham, Raleigh
6. A study of cotton in the south
7. Study of other world areas that produce cotton
8. Manufacture of cotton goods
9. Greensboro, Charlotte, Spartanburg
10. Stone Mountain—Atlanta

III. Atlanta, Miami, St. Petersburg, Daytona Beach, Atlanta
1. Cotton, peaches
2. The production of naval stores
3. Truck gardening
4. Jacksonville
5. Winter resorts
6. Citrus fruit industry and truck gardening
7. Everglades
8. St. Petersburg, phosphate deposit
9. Atlanta
10. Report to business firm

IV. Atlanta to New Orleans
1. Birmingham—iron and steel
2. Jackson
3. New Orleans—a collecting and distributing center
4. Sugar Bowl

V. New Orleans to Los Angeles
1. Production of rice and sulphur
2. Houston, Fort Worth
3. Study of the production of petroleum in the United States
4. Study of petroleum in other world areas
5. Fort Worth to El Paso
6. Grazing
7. Mining in the Plateau States
8. Salt River Project—study of irrigation in the United States
9. Phoenix
10. Grand Canyon and study of all National Parks

VI. Los Angeles to San Francisco
1. Study of various industries in vicinity of Los Angeles
2. Hollywood and motion picture industry
3. Great Valley of California
4. Report to business firm

VII. San Francisco to Seattle
1. Study of the harbor of San Francisco
2. Surface and climatic conditions of the region
3. Industries of the Sacramento—transient population in the coast states
4. Lumbering in the Northwest
5. Forests in other world areas
6. Agriculture of the Willamette Valley
7. Portland
8. Salmon industry
9. Other fishing areas of the world

VIII. Seattle to Chicago
1. Dry farming on the Columbia Plateau
2. Raising of sheep
3. Sheep raising in other world areas
4. Butte—copper smelting
5. Raising of wheat in the United States
6. Wheat production in other world areas
7. Minneapolis and St. Paul
8. Iron ore deposits in Great Lakes region
9. Report to the business firm

IX. Chicago to Buffalo
1. Chicago—study of the city and industries
2. Side trip thru the corn belt
3. Detroit, Toledo, Cleveland
4. Pittsburgh, Akron, Youngstown
5. Buffalo
6. Report to business firm

X. Buffalo, Boston, New York
1. Industries of New York State
2. Study of manufacturing in the northeastern states
3. Study of the important cities of New York
4. Boston and the New England States
5. New York City
6. Résumé of the entire trip and its business potentialities

PLANNING THE WORK

The next problem that each child had to decide was what line of work he wished to follow thruout the trip. If he had any difficulty in deciding, he had a short talk with the teacher concerning his interests and aptitudes that helped him to make a choice. The decision of each individual was of utmost importance for the success of the application of his geography hung upon a wise selection of vocation. In case of a poor student, it was the work of the teacher to guide his choice within range of his capabilities keeping in mind that learning cannot go forward without successes. The teacher explained that as each person traveled over the routes, he must look for conditions that would be favorable or unfavorable to his line of work. At the end of each section of the journey, he was asked to send a report to his business firm. By keeping this in mind, the pupil constantly applied the geographic facts learned to a life situation based upon individual interest.

The teacher prepared the work in advance very much in the form of a workbook, and mimeographed copies were handed to each pupil. Altho this is not essential to the success of the work, it did give the teacher more time to teach individuals. Good students were able to master the minimum essentials in a short time. This left

them a longer time to work on the application work which often proved a challenge to them.

There were no definite recitation periods. Sometimes twenty minutes at the beginning of the period were devoted to a discussion of a topic that most of the children were ready for, such as "The Raising of Cotton" or "Grazing in the United States." Sometimes a whole period was used to check the written work and again there might be three periods without oral recitation.

The periods when the pupils worked at their own problems were the most important and busiest for the teacher. In many ways, the most important part of a teacher's work is to teach pupils a good method of attacking their problems. Here was her chance to teach the use of geographic tools such as globes, atlases, encyclopedias, grafs, maps, to those who needed the help. Here also was an opportunity to clear up incorrect concepts made evident thru incorrect application. Problems of learning are largely individual, and a word or question often cleared up individual difficulties that might have been passed over in a class recitation.

The children moved about freely, consulting encyclopedias, maps, or reference material when they needed to. Often they consulted one another about their various problems.

APPLYING GEOGRAPHY

The children were required to fill in the blanks of the work describing the trip. Some time was allowed each day for the application work. They were permitted to work on either as long as the regular work was completed at the specified time. Perhaps the best way of illustrating the way the geography was applied is to list a few of the choices of the pupils and to explain briefly how each was carried out.

1. *Government Inspector of Nation's Food Supply*
   As we proceeded on this trip, this boy put symbols on a map of the United States (32" x 36") showing the crops raised in various parts of the country. His reports to the Department of Agriculture gave the good and bad agricultural conditions found en route.
2. *Mineralogist*
   This girl listed the minerals found in the states visited, got as many samples of the minerals as possible, and placed them at the bottom of a chart with tapes leading to a map to show the source of each. She also prepared a booklet on the uses of many minerals.
3. *Costume Designing*
   This girl designed materials to suit the places visited. Then she styled dresses made of this material. Examples:
   Shenandoah Valley ..... Red apples on white background

Philadelphia ..... Tiny American flags on white crepe
Atlanta ..... Open white cotton bolls on orchid background

4. *Writer of Children's Stories*
This girl chose fictitious characters, Jack and Jill, and had them travel with a young aunt. They described things seen that would especially interest youngsters.
5. *Representative of Travel Bureau*
This vocation required a great amount of research and of correspondence with various places because Travel Bureaus dwell on the unusual sights to attract tourists. The articles and pictures descriptive of the places were placed in a scrapbook together with the business letters which were sent in as reports.
6. *Buyer for Fruit Concern*
This boy studied conditions for growth of the various fruits in each section for the purpose of buying up land for his company.
7. *Illustrator for a magazine*
Because of his interest in art, this boy chose to take the trip as an illustrator. His sketches of places and buildings were sent with his report to the office of the editor of the magazine.
8. *Government Agent for Conservation*
This girl studied what the various states are doing along this line and reported to the Federal Conservation Bureau. She made charts to be included with her report.
9. *Designer of Materials*
The designs suggested by the region visited were drawn on white cotton cloth and colored with crayon. A description was given telling for what type of material the pattern was suited.
Tomatoes ..... New Jersey truck gardening
Small sailboats ..... East coast of Florida
Copper rings ..... Copper of Arizona
10. *Writer of Articles on Animal Life of the United States*
This pupil is particularly interested in animals and wanted to make the trip with the idea of finding out what animals live in different parts of the United States. She prepared an article on each animal and sent them to a magazine editor.
11. *Music of America*
This girl is a poor student but is very much interested in music. As she visited the large cities, she chose an appropriate song for the region. The music was copied and placed in a scrapbook.
New York ..... Sidewalks of New York
Baltimore ..... Star Spangled Banner
Atlanta ..... Dixie
Texas ..... Home on the Range

AN IDEAL LEARNING SITUATION

The applied geography made an ideal learning situation for it involved all the necessary characteristics. It was social and cooperative, and provided achievement of recognized success. The children discussed the problems upon which they were engaged and helped one another. Under these circumstances they learned more than the geography involved—they learned how to work together. Many times in learning geography, a pupil merely reads or listens

to explanations, and in so doing, the work remains outside his experience. In applying his geography, he was projecting his efforts and experiences into his work. It became an active process and consequently resulted in a higher degree of learning. Every child was successful. It was the work of the teacher to see that the pupils did not attempt work in which they could not succeed. Care was taken to see that the work was so organized that the pupil was constantly guided and encouraged by his own progress. In this way the teacher was teaching "success" and not failure.

THE OUTCOME

A survey was held in the junior high school at the close of the term regarding the pupil's choice of subject. This was not held in connection with the geography class, and, inasmuch as the pupils handed in unsigned statements, it is believed that the results are dependable. Eighty-five percent of the eighth grade class gave geography as their first or second choice of subject. The Metropolitan Standard Test was given at the end of the semester, and it was found that the class was one year above grade. The teacher had proved to her own satisfaction the truth of Dr. Kilpatrick's statement, "We learn what we live."

METHOD OF PROCEDURE FOR AN EXCURSION

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INTRODUCTION

There is more truth than fiction in the old maxim, "Seeing is believing." The elementary schools in the more progressive European countries have been cognizant of this fact for years; hence, the field trip or excursion has long been an integral part of their geography curricula. American elementary schools, too, have recognized the value of the field trip; consequently, the use of this teaching and learning activity has been steadily gaining momentum.

Teachers find it more difficult to plan and conduct an excursion than an indoor or classroom lesson. Due to the lack of experience and preparation, uncertainty and fear, many teachers abandon all thought of field work and fall back into the routine of textbook and classroom teaching.

This "Method of Procedure for an Excursion" represents the outgrowth of years of experience in the training of teachers. It has been tried and tested by teachers, critic teachers, supervisors, and the author and found to be a usable and workable plan. It is with the idea of helping those who earnestly wish to engage in field work that this plan is presented.

I. Preliminary preparation on the part of the teacher
   A. State the purpose, object, or aim of the excursion
   B. The teacher should obtain permission from the principal, supervisor, or superintendent to take the excursion
   C. If the excursion is an industrial one or one that requires the going onto property or into buildings, the teacher should obtain permission from the superintendent, manager, or owner of the property
   D. Before going on the excursion the teacher should gather information thru personal contacts or should read widely on the subject of the excursion in order to acquaint himself with the material
   E. The teacher should go on the excursion himself prior to the class excursion
   F. Upon returning from the excursion, the teacher should organize the subject matter material
      1. The route should be planned
      2. The places for stops should be determined
      3. The approximate number of stops should be determined
      4. The approximate length of time to be spent at each stop should be determined
      5. Thought-provoking questions to be discussed at each stop should be planned
      6. The body of subject matter to be used and the explanations to be made at each stop should be planned

II. Preliminary preparation on the part of the students
  A. Ways of arousing a class interest in the excursion
    1. The teacher may relate his experiences on the excursion and illustrate them with personal photographs
    2. Start a discussion of the subject with the class
    3. Post photographs and pictures on the bulletin board
    4. Students may be asked to make direct contacts
    5. Make a list of the things desired to be learned on the excursion
    6. Introduce the subject thru the use of stories
  B. Students' reasons why the excursion should be taken
    1. To gain information by first-hand experience
    2. To verify knowledge gained from other sources
    3. To verify inferences made
  C. A committee of students should obtain permission from the principal, supervisor, or superintendent to take the excursion
  D. If the excursion is an industrial one or one that requires the going onto property or into buildings, a committee of students should obtain permission from the superintendent, manager, or owner of the property
  E. A committee of students should set the date and time for the excursion

III. Preliminary preparation on the part of both teacher and students
  A. Organize the class into groups with leaders
    1. The teacher should determine the approximate number of groups to be used
    2. The teacher should determine the approximate number of students for each group
    3. The teacher should know which students possess qualities of leadership
    4. The students should elect group leaders who have qualities of leadership
    5. The students should choose the groups to which they wish to belong
    6. There should be a teacher-student discussion of
      a. Responsibilities of individuals, groups, and leaders
      b. Safety measures to be observed en route
      c. Discipline to be observed
  B. Arrange for transportation (if transportation is necessary)
    1. Walk (if the distance involved is not great)
    2. A committee of students should obtain permission from the principal, supervisor, or superintendent to use the school bus
    3. Students may volunteer to ask their parents for the use of the family car (one of the parents or an older member of the family being invited to go on the excursion and drive the car)
  C. The students and teacher should make an outline summarizing their present knowledge of the subject
  D. Things to be observed on the excursion
    1. The students and teacher should work out questions or problems of interest to all
    2. Each group should work out questions or problems of interest to it and be prepared to report to the class on its findings
    3. Students should work out questions or problems of interest only to themselves and should be encouraged to obtain the information necessary for a satisfactory solution to them
    4. The teacher may add questions or problems covering essential points not suggested by the students

IV. The excursion

V. Follow-up work

A. Discussion of the excursion

1. There should be a general discussion of the questions and problems of interest to all
2. Group reports should be written and given orally before the class
3. Individuals may submit written or give oral reports
4. There should be a general discussion of all reports in order to clarify ideas and thinking

B. Organization of the material of the excursion

1. The material which has been outlined in III C above should be supplemented, revised, and completed
2. The material of the excursion may be presented in the form of a written composition and based on the complete outline of V B 1 above

C. Test on the excursion

1. New type
   a. True-False
   b. Completion
   c. Multiple Choice
   d. Matching
2. Essay

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GERMANY—A CONTROVERSIAL SUBJECT

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"We now take you to Berlin." Such radio contacts, newspaper articles, and general conversation in regard to European affairs raise the interest of the junior high school student to such a high level of intellectual inquiry that the teacher cannot help but to respond with an approach which will provide opportunities for the study of geographic conditions which play such an important part in present day Europe. The following plan has proven to be a challenging and satisfactory method of solution to the problem and is flexible enough to fit in with any group or course of study.

I. Introduction

A. Current articles and maps in regard to geographic and political changes and demands which furnish subjects for discussions and raise problems for solution.

B. Statistical materials available in the appendices of most texts which furnish figures in regard to area, total population, density of population, and percentage of population employed in the various occupational groups. These may be compared in graphic forms to similar classifications in the United States and/or with other countries recently studied.

II. Main Problems

A. For what geographic reasons is Germany interested in obtaining more territory?

1. What geographic necessities for manufacturing does Germany have?

2. What geographic necessities for manufacturing does Germany lack?

3. What geographic necessities for agriculture does Germany have?

4. What geographic necessities for agriculture does Germany lack?

B. What geographic advantages does Germany expect to gain in taking over the former countries of Austria, Czechoslovakia, and part of Poland?

The first problem was evolved from introductory tabulations which showed that, in numbers of peoples, the leading occupational

groups are manufacturing and agriculture and, therefore, emphasis was placed upon these two. From this resulted discussion culminating in the formulation of certain requirements necessary for manufacturing such as: labor, raw materials, markets, transportation facilities, suitable climate, and power resources; and the formulation of certain requirements necessary for agriculture such as: labor, available land, level surface, suitable climate, fertile soil, and scientific methods. The students then undertook to find out from available textbooks, newspaper and magazine articles, maps, and pictures which of these requirements Germany had and which it lacked.

This resulted in a study of climatic conditions, location, rivers and other facilities for transportation, manufacturing centers, surface, population, soil, agricultural products, minerals, trade and commerce, and methods and types of manufacturing and agriculture.

The second problem resulted in a study of the geographic aspects of the areas taken over by Germany and their possible contributions to the Reich. Here also was brought out the variance in viewpoints between the German government and the United States Department of State as to the status of these countries concerned.

III. Conclusions

The facts were summarized by the students as follows (in brief):

A. Germany has certain necessities for manufacturing such as: large population, capable and energetic people, stimulating climate, developed transportation facilities, modern machinery, and some available minerals and other raw materials; but lacks certain minerals, raw materials, and an adequate market for its goods.

B. Germany has agricultural necessities such as: labor and scientific methods, but lacks sufficient land, fertile soil, and climatic variations.

C. From the territory gained Germany has additional transportation routes, agricultural lands, minerals and other raw materials, and a future market for its manufactured articles.

The fact that the study of Germany presents controversial subjects which demand discussion and some factual basis for thought in order to understand them, and the fact that texts are written with Austria, Czechoslovakia, and Poland as entities while current publications show the opposite, demand explanations which a geographic understanding helps to provide even while other psychological and historical factors must be added to complete the whole.

PRELIMINARY REPORT OF CHICAGO MEETING OF THE NATIONAL COUNCIL

The National Council of Geography Teachers held its twenty-sixth annual meeting at the University of Chicago and the Hotel Windermere on December 27 and 28, 1939. It was a very successful meeting. Some features of it had been tried in National Council meetings several years ago but had not been in effect recently. One of these was the use of demonstration lessons. The afternoon program of the first day was in charge of Professor Edith Parker of the University of Chicago who tried an unique experiment with much success. She first discussed with a group of her college students, teachers in training, what to look for in a geography lesson. Then Miss Dorothy Mandeville taught a lesson with sixth-grade children and Miss Monica Kusch, with a high school class. After the lessons Professor Parker discussed them with her college students showing how the conclusions reached in her earlier period with them functioned in the observation of a geography lesson. After that there was discussion from the floor.

Another special feature of the program was the division into sections of the morning meetings on the second day. One section was devoted to elementary education at which three of the six speakers were elementary school teachers. The Secondary and College section which met at the same time had several papers dealing with problems of geography teaching in the upper grades. Miss Sadie Friedlander gave a most interesting demonstration of pupil activity. Two of her students demonstrated a unit of work on the community for which they had made stereoptican slides. They showed the slides with a most interesting running comment on them.

The afternoon of the final day was devoted to a joint meeting with the Association of American Geographers where papers were presented dealing with many of the issues of the European situation.

Another interesting feature of the program was the evening meeting of the first day at which Professor Rudolf Bennitt of the University of Missouri spoke on the Relationships of Wildlife Conservation to Geography. The Council was interested to hear a speaker who is a specialist not in geography, but in a closely allied field.

The social side of the meeting was not neglected. Tea was served at the University of Chicago on both the first and the second days.

The Council enjoyed a joint luncheon with the Association of American Geographers and the dinner at the Hotel Windermere was as delightful as National Council dinners always are. At this meeting Dr. Raymond E. Crist of the University of Illinois showed stereoptican slides which were made from photographs taken during his summer trip thru the Balkans and North Africa. They illustrated several issues connected with land tenure and exploitation of native labor in the countries which he visited.

EDWIN H. REEDER, *President*

PAN AMERICAN DAY—APRIL 14

April 14 marks the fiftieth anniversary of the founding of the Pan American Union and a very long period of friendly relations between Latin American countries and the United States. It is eminently worth while for us to do all that we can to perpetuate friendly intercourse. This occasion offers an excellent opportunity to study Latin America, to arouse the interest of students in that part of the Americas, and develop an appreciation of its material production and cultural advances. The Pan American Union, Washington, D.C. is ready to co-operate with you. We are happy to publish the following list of material that the Union will supply to schools, free of charge. Teachers, planning a program of study should address the Union at once. *Do not have students write for the material.*

1. THE PAN AMERICAN UNION, 1890-1940. The history and development of the international organization of the twenty-one American Republics.
2. HIGHLIGHTS OF A HALF CENTURY OF PAN AMERICAN PROGRESS. Chronological presentation of the outstanding events in the progress of the American Republics, 1890-1940.
3. THE PAN AMERICAN CONFERENCES, 1890-1940. The work of the International Conferences of American States and of the special and technical Pan American conferences.
4. INTERNATIONAL LAW AND INTERNATIONAL PEACE IN THE AMERICAS. The evolution of the codification of international law and the development of the machinery for the pacific settlement of international controversies.
5. A HALF CENTURY OF ECONOMIC PROGRESS. The advance of commerce, industry and agriculture during the fifty-year period, 1890-1940.
6. CONTRIBUTIONS TO THE INTELLECTUAL LIFE OF THE WESTERN HEMISPHERE, 1890-1940. Progress in the promotion of closer cultural relations among the Republics of the American Continent.
7. HALF A CENTURY OF MEDICAL AND PUBLIC HEALTH PROGRESS. Advances in the field of medicine, public health and sanitation, 1890-1940.

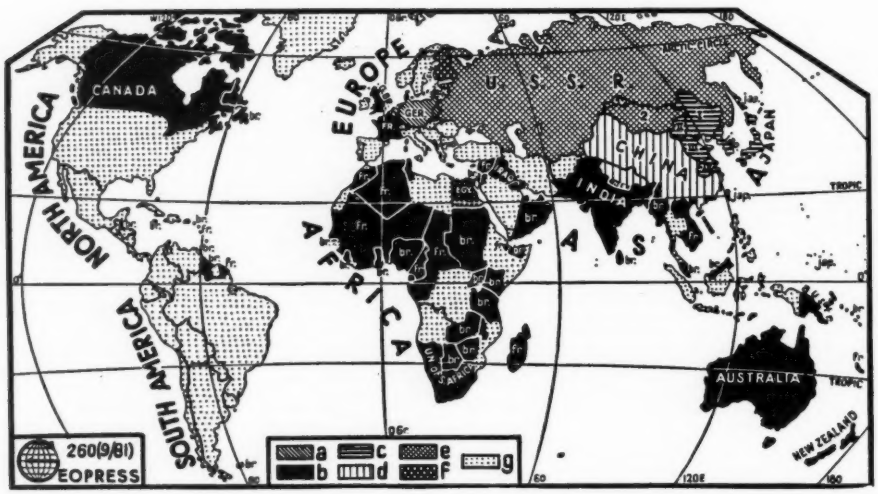
8. DEVELOPMENTS IN INTER-AMERICAN TRANSPORTATION AND COMMUNICATION, 1890-1940. Shortening the distances and speeding communications between the American Republics.
9. PLEASURE AND HEALTH RESORTS IN LATIN AMERICA. Present-day attractions for the traveler—city, country and seaside.
10. THE AMERICAS. Major historical facts, principal geographical features, forms of government, products and industries, transportation facilities and educational systems of the twenty-one American Republics. Also questions, the answers to which may be found in the text; for the use of teachers in the classroom.
11. ASK ME ANOTHER! Questions designed to test one's knowledge of the history, geography and different phases of life in the Americas.
12. FLAGS AND COATS-OF-ARMS OF THE AMERICAN NATIONS. Historical sketch and brief description of the meaning of the flags and coats-of-arms of the twenty-one American Republics.
13. WHAT OTHERS HAVE DONE FOR PAN AMERICAN DAY PROGRAMS. Summarized ideas which have been worked into successful Pan American Day programs in past years in the United States and Latin America; including outlines of ceremonies utilizing the flags of the twenty-one American Republics.
14. SOURCES FOR LATIN AMERICAN MUSIC. Brief lists of songs, orchestra and band arrangements, and collections of songs, sheet music and phonograph records, with names of publishers.

PLAYS AND PAGEANTS

15. FIESTA PANAMERICANA. A carnival, representing a gay fiesta as it might take place in a Latin American country. Instrumental and vocal music and dancing, woven into a colorful carnival background. (Takes about one hour and a half to present; suitable for senior high school, college or adult groups.)
16. PAN AMERICA. A pageant, by Grace H. Swift. Suitable for presentation by high schools; takes about 30 minutes to present.
17. CHRIST OF THE ANDES. A play, by Eleanor Holston Brainard. (Requires about 15 minutes to present; suitable for presentation by sixth grade pupils.)
18. PAN AMERICAN DAY. Short Pan American Day pageant suitable for elementary grades.

EDITORIAL NOTES AND NEWS

The accompanying map might well be labeled "The Crazy World at War." It appears that humanity enters the new year locked in a life and death struggle—attempting to destroy itself. Approximately 70 per cent of the population of the world is among the belligerents and nearly two-thirds of the land area is involved. In the major war, if it can be so designated, Germany is fighting France and Great Britain, which also involves French colonial areas, Australia, Canada, New Zealand, Union of South Africa, India, Iraq, and Nepal. Egypt has not declared war on Germany but has broken diplo-



a) Germany and Slovakia; b) British Empire, France, and allies; c) Japan and allies; d) China; e) U.S.S.R. and allies; f) Finland; g) Neutral states

matic relations with it. Poland was quickly conquered by Germany and has been absorbed by Germany and U.S.S.R.

The Sino-Japanese conflict appears to have assumed a secondary rating among the undeclared wars. However, it has been in progress about thirty-two months and is not yet over. The attack of U.S.S.R. on Finland has added a third conflict to the list. What will be the situation by this time next month?

The following presents an interesting summary of the situation in the world at war.

	Area in millions of square miles	*Millions of inhabitants*
Central and Western European Conflict.		
Germany (including the occupied territories in Poland) and Slovakia	0.35	109
The British Empire, France (both with their colonies, protectorates and mandated territories), Iraq and Nepal	22.51	653
Far Eastern Conflict.		
Japan (with its colonies and mandated territories), Manchukuo, Inner Mongolia, North China, Central China (on the map: I, II, III, IV)	1.04	280
China (with Tibet)	2.90	300

North European Conflict.

Soviet Union (with the annexed territories in Poland), Tuva and Mongolia (on the map: 1, 2)	8.92	184
Finland	0.15	4
Belligerent States	35.87	1,530
Neutral States	20.81	613

It is not too early to begin plans for attending the next annual meeting of the National Council of Geography Teachers which will be held December 28 to 30, at the University of Louisiana, two miles out of Baton Rouge. A field trip, of at least one day, December 30, is being planned. Maybe you will wish to spend your entire holiday in the South. If so, consult your school calendar at your earliest convenience. Perhaps your calendar of school events for next year is already set; but, if not, you may have an opportunity of getting your administration to set the Christmas-New Years holiday at such dates that will permit your attendance at these meetings. The University dormitories and class rooms are being opened to the Council. Hotel accommodations at New Orleans at this season are in such great demand, owing to the New Year Sugar Bowl game and the events preceding it, that advance reservations are already being made. This preliminary announcement will be followed by others from time to time.

Most of the British possessions in the Lesser Antilles are grouped into two Crown Colonies; the Windward Islands and the Leeward Islands. On January 1, 1940 the Island of Dominica, containing an area of about 305 square miles and a population of approximately 49,000, was transferred from the Leeward Islands group to the Windward Islands group. This change has been made at the request of the inhabitants of Dominica. The request was based largely on economic and linguistic grounds. The Negro population of Dominica speaks French as does the greater population of the Windward Islands. The governor of the Windward Islands resides at St. George in the Island of Grenada. The Crown Colony of the Windward Islands consists of Grenada, St. Vincent, St. Lucia and Dominica. The total area of this group is 826 square miles and the population 255,000. The Leeward Islands group now consists of the four Presidencies of Antigua, St. Christopher and Nevis, the Virgin Islands, and Montserrat. This colonial group has an area of 422 square miles and a population of about 92,600.

According to the United States Department of Agriculture, farmers drew about $10,000,000 from the sale of Christmas trees and floral greens. The Department is encouraging this means of getting a supplementary income by urging this seasonal industry, especially if derived from impoverished soils, untillable banks, and steep slopes needing soil conservation practices. Besides Christmas trees, several kinds of holly, mistletoe, smilax, laurel, galax, and bittersweet are being planted. Some states are prohibiting the purchase, sale, and picking or cutting of certain of these greens and berries except by the land owners or others legally authorized to do so.

Japan has announced an airline service to Bangkok, capital of Thailand, beginning in February. It will be remembered that Siam last May officially adopted Thailand as its name. The land of the Thai is a very old name for these free people. Southern Thailand exports annually about $43,000,000 of rice, $13,000,000 of tin ore, and $10,000,000 of rubber, the biggest share of which moves out thru Singapore and Hong Kong.

A publishing house reports that one of its salesmen recently left Barranquilla, Colombia, at 8:00 A.M. by plane and arrived at Chicago at 6:00 A.M. the next morning. You may wish to lay off this route on your globe.

GEOGRAPHICAL PUBLICATIONS

Charles N. Elliott and M. D. Mobley. **Southern Forestry.** 494 pages, 191 illustrations. Turner E. Smith and Company. Atlanta. 1938. $1.60.

Elementary and high school geography courses may well include units dealing with the major problems of resource utilization and conservation in the home region. This book will aid teachers in the South in presenting such units. It is intensely practical in viewpoint, dealing with things that are being done and can be done profitably by the farmers, timber-land owners, and governmental agencies in the South. It contains much of interest to the general reader, but is written primarily as a textbook for classes in vocational agriculture by a forester of broad training and experience and by the state director of vocational education in Georgia. The treatment is non-technical. Each chapter is followed by lists of questions, suggested activities, and readily obtainable references. The illustrations are chiefly photographs and some of them have considerable educational value.

The twenty-four chapters of the book are grouped into units entitled: Forest Policies Past and Present, Forest Relationships, Forest Industries, Forest Trees, Forest Enemies, Forest Management, Reforestation, and Forest Agencies. Geography teachers will find the first, second, and fifth units readily adaptable to their courses and much of the remainder is useful for supplementary material. The four chapters in the Forest Relationship unit treat, respectively, of the relation of the forest to agriculture, soil erosion, wildlife, and recreation. Each is a rather adequate general treatment of these important aspects of conservation. The book is worthy of general adoption as a text and no school library in the South should be without it. Many questions are treated in such a way as to make the book a useful reference for schools in other sections of the country.

E. M. SCOTT

University of Wisconsin

Walter B. Pitkin and Harold F. Hughes. **Seeing Our Country.** Book II. 384 pp. Illustrated. The Macmillan Co., N.Y. 1939. $1.60.

Glimpses of certain key industries, especially of new chemical developments, and of great engineering feats are the core of the book. The narrative is provided by youthful visitors accompanied by an employer or employee or by one looking for a job requiring skill. Thus is developed an appreciation of the value of research, the dignity of labor, the interdependence between each industrial set up and the products of the farm, the forest, the mine, as well as the natural advantages certain sections have to offer industry or recreation, such as climate, topography, surface waters. The discussions are illustrated by about 150 excellent photographs. The book affords very interesting supplementary material, and is suggestive of what one's own locality may offer to those willing to look for it.